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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,183	02/13/2003	Takehiko Kitamori	2002-0252A	7634

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EXAMINER

FINEMAN, LEE A

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/069,183	Applicant(s) KITAMORI ET AL.	
	Examiner Lee Fineman	Art Unit 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/22/02</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the diffraction grating (claim 3) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: When using an acronym at the first occurrence (i.e. PLL) the meaning should be expressly stated.

Appropriate correction is required.

Claim Objections

3. Claims 1-5 are objected to because of the following informalities: In claim 1, line 8 “the diffusion” lacks antecedent basis. The dependent claims inherit the deficiencies of the claims from which they depend.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Morris et al., U.S. Patent No. 4,591,272.

Regarding claim 1, Morris et al. disclose a desktop thermal lens microscope apparatus (fig. 1) being a thermal lens microscope (fig. 1, column 3, lines 50-52) that is arranged to have a construction wherein an excitation light (16) and a probe light (22) are entered into an optical microscope (fig. 1); and the probe light (22) is entered into a thermal lens (column 4, lines 8-14) formed by the irradiation of the excitation light (16) into a specimen (14), where by the detection of substances in the specimen is performed by measuring a diffusion of the probe light resulting

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from the action of the thermal lens (see example 2 and figs. 3 and 4), the desktop thermal lens microscope apparatus being characterized in that the apparatus is equipped with small-sized laser light sources (18 and 20) serving, respectively, as an excitation light source (18) and a probe light source (20); and the excitation light source, the probe light source, and the thermal lens microscope optical system are integrated together in a single housing (column 4, lines 59-61).

Regarding claim 1, Morris et al. further disclose being equipped with a chopper (24) in order to perform lock-in amplifier signal processing and with a modulation mechanism (not shown) that performs PLL control of the drive of the chopper and thereby performs modulation of the excitation light (column 4, lines 18-25 and lines 49-51).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morris et al. in view of Opsal, U.S. Patent No. 5,074,669 or Rosencwaig et al., U.S. Patent No. 4,750,822.

Morris et al. further disclose a method of performing a chemical analysis characterized by including the step of performing a chemical analysis of a very small value of quantity in a micro spatial region with the use of the desktop thermal lens microscope (see abstract and example II). Morris et al. disclose the claimed invention except for explicitly stating that the sample region is on a chip. It is very well known to examine many different specimens with a microscope system.

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Further, semiconductor chips are well known in the art as a specific specimen of interest to be examined. For example, both Opsal and Rosencwaig have a thermal lens microscope system (fig. 1, Opsal and fig. 2, Rosencwaig) which examine chips (42, Opsal and abstract, Rosencwaig). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made make the sample of Morris et al. any sample including a chip as suggested by Opsal or Rosencwaig to be able to gather quantitative data about that sample.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morris et al. in view of Hiraga et al., International Patent Publication WO99/08149.

Morris et al. further disclose a filter (fig. 1) for which the probe light and the excitation light are separated from each other to thereby extract only the probe light alone. Morris et al. disclose the claimed invention except for explicitly stating the filter is a diffraction grating. Hiraga et al. teaches a thermal lens microscope system (fig. 1) which includes a filter (20) which separates the probe light and the excitation light from each other to thereby extract only the probe light alone (page 28, lines 13-16) and further teaches that the filter, a prism, diffraction grating or dichroic mirror are art-recognized equivalents for filtering specific wavelengths (page 28, lines 17-18). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use any of the above filters, including a diffraction grating, in the system of Morris et al. to filter out a specific wavelength.

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9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morris et al. in view of Opsal or Rosencwaig et al., as applied to claims 4 and 5 above, and further in view of Hiraga et al.

Morris et al. in view of Opsal or Rosencwaig et al., as applied to claims 4 and 5 above further disclose a filter (fig. 1, Morris) for which the probe light and the excitation light are separated from each other to thereby extract only the probe light alone. Morris et al. in view of Opsal or Rosencwaig et al., as applied to claims 4 and 5 above disclose the claimed invention except for explicitly stating the filter is a diffraction grating. Hiraga et al. teaches a thermal lens microscope system (fig. 1) which includes a filter (20) which separates the probe light and the excitation light from each other to thereby extract only the probe light alone (page 28, lines 13-16) and further teaches that the filter, a prism, diffraction grating or dichroic mirror are art-recognized equivalents for filtering specific wavelengths (page 28, lines 17-18). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use any of the above filters, including a diffraction grating, in the system of Morris et al. in view of Opsal or Rosencwaig et al. to filter out a specific wavelength.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hiraga et al., U.S. Patent No. 6,452,710 B1 is the English equivalent to WO99/08149.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lee Fineman whose telephone number is (571) 272-2313. The examiner can normally be reached on Monday - Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LAF
August 31, 2004


MARK A. ROBINSON
PRIMARY EXAMINER